



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/511,193

10/12/2004

Norbert Herfert

29827/38367A

8679

4743 7590 08/05/2008
MARSHALL, GERSTEIN & BORUN LLP
233 S. WACKER DRIVE, SUITE 6300
SEARS TOWER
CHICAGO, IL 60606

EXAMINER

SIMONE, CATHERINE A

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

08/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,193	Applicant(s) HERFERT ET AL.	
	Examiner Catherine Simone	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/7/2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 28 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitation "wherein said sheet is free of fibers" in claim 28 is deemed new matter. The Specification, as originally filed, does not provide support for this new recitation. The Specification only has support for what is on page 20, lines 35-36. Specifically, Applicant has support for the sheet material being "free of cellulosic fibers or other fluff materials", not "free of fibers", which has different scope of meaning. The new recitation "free of fibers" has a broader

scope of meaning than “free of cellulosic fibers”. Furthermore, on page 34, lines 18-19, in Example 2, Applicants disclose the sheet material to contain SAP, plasticizer and a nonwoven fiber. Thus, the sheet material can contain fibers and is not “free of fibers”, as now recited in new claim 28. Accordingly, the recitation “wherein said sheet is free of fibers” in new claim 28 is not supported in the Specification and, therefore, is deemed new matter.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 14 recites the limitation "the optional ingredient" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8, 11 and 13-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melius et al. (US 6,323,388 B1) in view of Beihoffer et al. (US 6,072,101).

Regarding claims 1, 18 and 19, Melius et al. teach an absorbent article wherein the article is a diaper (col. 3, lines 15-27) comprising a flexible absorbent sheet (Figures 2 and 3, sheet 48) consisting essentially of a superabsorbent polymer component, as particles, (col. 9, lines 41-43 and col. 10, lines 5-25 and 47-59) wherein the superabsorbent polymer component is free of interparticle crosslinking, since the superabsorbent polymer component is in the form of discrete particles (col. 10, lines 47-50) and there is no mention of interparticle crosslinking; and a plasticizing component in an amount of about 0.1 to 200 parts by weight per 100 weight parts of the superabsorbent polymer component (col. 12, lines 25-35 and 67-68; and col. 13, lines 1-7), wherein the sheet contains about 60% to 100%, by weight, of the superabsorbent polymer component and the plasticizing component (col. 11, lines 54-67; and col. 12, lines 1-35 and 67-68; and col. 13, lines 1-7). The transitional phrase "consisting essentially of" is being construed as equivalent to "comprising" due to the fact that there is no clear indication in the specification or claims of what the basic and novel characteristics actually are.

Melius et al. fail to specifically teach the superabsorbent polymer component (particles) comprising at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin.

Beihoffer et al. teach multicomponent superabsorbent polymer particles that are useful in diapers (col. 15, lines 48-51) and include at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin (col. 4, lines 15-31) for the purpose of overcoming the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses (col. 4, lines 32-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer particles in Melius et al. to include at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin as suggested by Beihoffer et al. in order to overcome the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Regarding claim 2, Beihoffer et al. teach superabsorbent polymer particles comprising discrete particles of the acidic resin and discrete particles of the basic resin (col. 4, lines 40-48) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer discrete particles in Melius et al. to include discrete particles of acidic resin and discrete particles of basic resin as suggested by Beihoffer et al. in order to overcome the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Regarding claim 3, Beihoffer et al. teach multicomponent superabsorbent polymer particles wherein each particle has at least one microdomain of the acidic resin in contact with, or in close proximity to, at least one microdomain of the basic resin (col. 5, lines 5-9 and 55-58) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer particles in Melius et al. to be multicomponent superabsorbent polymer particles wherein each particle has at least one microdomain of the acidic resin in contact with, or in close proximity to, at least one microdomain of the basic resin as suggested by Beihoffer et al. in order to overcome the salt

poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Regarding claim 4, note the superabsorbent polymer particles in Melius have a particle size distribution of about 10 to about 810 μm (col. 10, lines 56-57).

Regarding claim 5, note the superabsorbent polymer particles in Melius have a particle size distribution of about 30 to about 375 μm (col. 10, lines 56-57).

Regarding claim 6, note the superabsorbent polymer particles in Melius have a mass median particle size of less than about 400 μm (col. 10, lines 56-57).

Regarding claim 7, note the acidic water-absorbing resin in Beihoffer et al. is polyacrylic acid (col. 4, lines 15-17).

Regarding claim 8, note the basic water-absorbing resin in Beihoffer et al. is a poly (dialkylaminoalkyl(meth)acrylamide) (col. 4, lines 17-21).

Regarding claim 11, the limitation “internally plasticized” is deemed a method limitation and is being given little patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. MPEP 2113.

Regarding claims 13 and 14, note in Melius up to 40%, by weight in total, of one or more optional ingredients such as nonabsorbent fillers (col. 11, lines 49-54 and col. 37, lines 38-42). Also, it is to be pointed out that the limitation “optional ingredient” is optional and may or may not be disclosed in Melius. Thus, claims 13 and 14 are anticipated by Melius.

Regarding claim 15, the sheet in Melius inherently has a stiffness of less than about 6 mNm, since the sheet is flexible and is being used to form a diaper or catamenial device which is similar to that of Applicant’s present invention.

Regarding claim 16, note the sheet in Melius has a density of not more than 0.6 g/cc (claim 11), which would include the claimed range of about 0.3 to about 0.9 g/cc.

Regarding claim 17, note the sheet in Melius is embossed (Figs. 7 and 8; and col. 29, lines 35-56).

Regarding claim 20, note the absorbent sheet is the core of the absorbent article (diaper) in Melius (Fig. 2, absorbent sheet 48).

Regarding claim 21, note two absorbent sheets as the core of the absorbent article (diaper) in Melius (Fig. 2, sheets 44 and 48).

Regarding claim 22, note in Melius a wicking layer (distribution or intake layer) disposed between the two sheets (col. 14, lines 34-48).

Regarding claim 23, note in Melius a top sheet in contact with a first surface of the core (Figs. 2 and 3, topsheet 28), and a backsheet in contact with a second surface of the core (Figs. 2 and 3, backsheet 30), the second core surface opposite from the first core surface.

Regarding claim 24, note in Melius an acquisition layer (Figs. 2 and 3, layer 46) disposed between the top sheet (Figs. 2 and 3, topsheet 28) and the core (Figs. 2 and 3, core 32).

Regarding claim 25, note the diaper in Melius *can* include an acquisition layer (col. 18, lines 57-58), hence the diaper in Melius could be free of an acquisition layer.

Regarding claim 26, note the sheet in Melius is free of cellulosic fibers (col. 11, lines 49-54).

Regarding claim 27, note in Melius at least one of the sheets further comprises up to 25%, by weight, of nonwoven fibers (claim 7).

9. Claims 9, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melius et al. in view of Beihoffer et al. as applied to claim 1 above, and further in view of Brueggemann et al. (US 6,051,317).

The combination of Melius et al. and Beihoffer et al. teach the presently claimed flexible absorbent sheet as shown above. However, Melius et al. fail to specifically teach the plasticizer being selected from the group of plasticizers recited in claims 9, 10 and 12. Brueggemann et al. teach sheet-like superabsorbent structures, which can be used in diapers, to include plasticizers such as 2-ethylhexanol (alcohol) and glycerol (col. 2, lines 46-49) for the purpose of providing flexibility to the sheet (col. 2, lines 44-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the plasticizer in Melius et al. to consist of an alcohol or glycerol, which are one of the plasticizers recited in claims 9, 10 and 12, as suggested by Brueggemann et al. in order to provide a flexible superabsorbent sheet for the diaper.

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmed et al. (US 6,458,877 B1) in view of Beihoffer et al. (US 6,072,101).

11. Ahmed et al. teach a fluffless, flexible absorbent sheet comprising a superabsorbent polymer component, as particles, wherein the superabsorbent polymer component is free of interparticle crosslinking (col. 5, lines 8-24 and col. 13, lines 15-20), a plasticizing component in an amount of about 0.1 to about 200 parts by weight per 100 weight parts of the superabsorbent polymer component (col. 3, lines 62-65 and col. 4, lines 19-27 and col. 5, lines 50-53), wherein the sheet contains about 60% to 100%, by weight, of the superabsorbent polymer component and

Art Unit: 1794

the plasticizing component, and 0% to 40% by weight in total, of one or more optional ingredients such as pigments and/or nonabsorbent fillers (col. 8, lines 20-28 and col. 10, lines 11-21), wherein the sheet is deemed free of fibers, since Ahmed et al. is silent to the fact of providing the sheet with fibers.

Ahmed et al. fail to specifically teach the superabsorbent polymer component (particles) comprising at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin.

Beihoffer et al. teach multicomponent superabsorbent polymer particles that are useful in diapers (col. 15, lines 48-51) and include at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin (col. 4, lines 15-31) for the purpose of overcoming the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses (col. 4, lines 32-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer particles in Ahmed et al. to include at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin as suggested by Beihoffer et al. in order to provide a disposable absorbent article, such as a disposable diaper, with the ability to overcome the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Response to Arguments

12. Applicant's arguments filed 7/7/2008 have been fully considered but they are not persuasive.

Applicants argue that “the ‘388 patent stated that a recited ingredient (i.e., fibers) is an essential ingredient of retention portion (48). Therefore, exclusion of such an essential ingredient would necessarily affect the basic and novel characteristics ingredient the disclosed compositions...the ‘388 patent does not teach or suggest any retention portion (48) that is free of fibers”.

However, as shown in the 103 rejection above, the transitional phrase “consisting essentially of” is being construed as equivalent to “comprising”, since there is no clear indication of what the basic and novel characteristics of the claimed invention actually are. Thus, the “consisting essentially of” language in amended claim 1 is not excluding fibers. Accordingly, the combination of the '388 patent and the '101 patent renders the present claims obvious.

Applicants further argue “the present flexible sheet is free of fibers and can be formed as a continuous sheet, having good absorbency properties, and provides a thin absorbent sheet. The inclusion of fibers would, at least, increase the thickness of the absorbent, and accordingly materially affect the basic and novel characteristics of the claimed flexible absorbent sheet”.

This is not deemed persuasive. Applicants specification indicates on page 19, line 20 that the absorbent sheet of the present invention can include an optional ingredient of nonwoven fibers and further in lines 9-14 on page 19 that the absorbent sheet of the present invention can contain 0% to about 40% by weight of the optional ingredient. Additionally, on page 20, lines 35-38 of Applicants specification, it is indicated that the absorbent sheet of the present invention

can contain up to about 25% by weight of a fluff material (i.e., fibers), if desired. The '388 patent teaches the retention portion to include fibers as well as the superabsorbent material. The reference teaches the superabsorbent portion accounting for at least about 0.5% up to about 80%, by weight of the retention portion. Therefore, the retention portion of the '388 patent contains from about 20% to about 99.5%, by weight, of fibers, which overlaps with the % by weight of fibers present in the absorbent sheet of the present invention. Thus, it is not clear how the presence of fibers in the absorbent sheet of the present invention would materially affect the basic and novel characteristics of the claimed invention, since the absorbent sheet of the present invention can include fibers. There is no evidence that the presence of fibers in the absorbent sheet of the present invention would materially affect the basic and novel characteristics of the claimed invention. The retention portion of the '388 patent appears to have the same basic and novel characteristics, i.e. flexibility, thinness and good absorbency properties, as that of the absorbent sheet of the claimed invention. Applicants state that the presence of fibers in the absorbent sheet of the present invention would increase the thickness of the absorbent and therefore materially affect the basic and novel characteristics of the claimed flexible absorbent. However, this is not clearly shown. It is to be pointed out that the absorbent sheet of the present invention can include fibers as indicated in Applicants specification. Additionally, the resulting thickness of the claimed absorbent sheet is between 0.05 and 1.5mm (page 21, lines 23-28) and the resulting thickness of the retention portion in the '388 patent can be at least a minimum of 0.5 mm and not more than a maximum of about 30 mm (col. 13, lines 41-52). Thus, the retention portion of the '388 patent can have a thickness similar to the thickness of the claimed absorbent sheet, i.e. a thickness of between 0.5 mm to 1.5 mm. Accordingly, the presence of fibers in the

Art Unit: 1794

absorbent sheet of the present invention would not necessarily increase the thickness of the absorbent sheet to provide a sheet of non-thinness and therefore would not materially affect the basic and novel characteristics of the claimed invention. As a result, the combination of the '388 patent and the '101 patent renders the present claims obvious.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571) 272-1501. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Catherine Simone/
Examiner, Art Unit 1794

July 21, 2008

/KEITH D. HENDRICKS/
Supervisory Patent Examiner, Art Unit 1794